

Marking Parts to Make a Lasting Impression

by:

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Today's marking technology can enhance products through versatile printing capabilities, a variety of processing options and cost-effective operation.

From identifying your product, in-house tools and equipment, to providing value-added services by marking customer logos, diagrams and specialty items — product identification can no longer be an afterthought. The identification of parts is quickly becoming a prerequisite for most companies and organizations. The time is now to seriously consider the most beneficial way to make your mark.

Making the Right System Choice

Product and part identification quickly eliminates errors, valuable time and material waste expenditures while helping to streamline production, thus ultimately increasing a company's bottom line. Choosing the right marking system must be a careful consideration.

The production application (parts, material, geometries and volume) must be well defined along with the environment in which the system will be working. Origin of manufacture, craftsmanship, service and support should also be seriously investigated. As with all production machinery, the more it can do for you, the more economical the equipment becomes.

Most identification processes can permanently mark parts for cradle-to-grave traceability such as steel stamping, dot peening, laser marking, impact marking (micro percussion machining), and chemical etching. The processes range from simple to complex, depending on production requirements.

Steel stamping and dot peening can be ideal for simple marking on heavy metal and other materials where aesthetics of the mark is not an issue and the marked information does not change frequently during short periods. This method is generally performed in a production area where the brief noise generated by these methods has little or no effect.

Chemical etching involves dangerous solvents and consumables, is difficult to automate, and can only be used with conductive material. Delicate parts can be identified without damage or distress, although it is advised to review and consider any safety issues and requirements thoroughly.

Cost-Effective Mechanical Marking

Impact marking can streamline permanent marking on a wide variety of parts and materials of all sizes and shapes. Online's LM-4400 permanent impact marker performs micro impacts into the substrate with its solid carbide "vibrating" pin. With microburst impacts up to 400 times per second, the result is clean, crisp lines (whether logos or alphanumeric) and characters as small as 0.015" (0.4mm).

The system allows you to view the information to be marked on the screen prior to marking the product - all without mathematical equations or programming experience required.

High-Speed Laser Marking

Laser marking presents great technical advantages over the traditional techniques. Laser marking offers many different configurations, systems and methods. This technology will continue



The LM-4400 Permanent Impact Marker economically marks materials from steel to plastic.

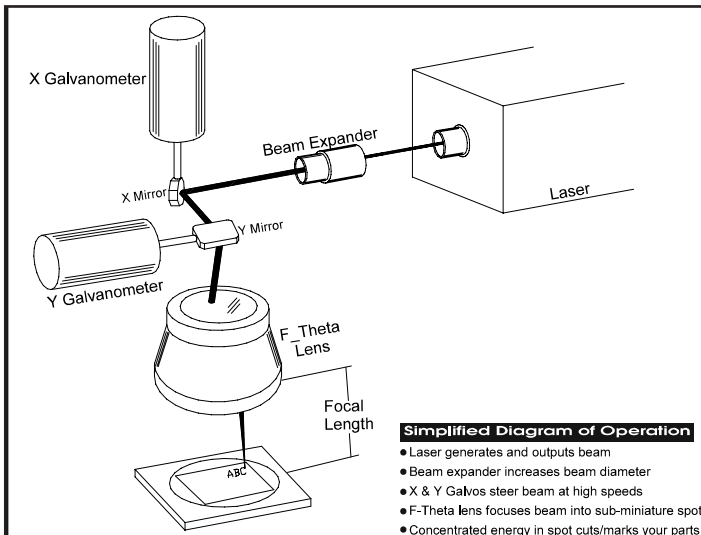
to grow, and with it will grow solutions. Definition of production applications is crucial in order to achieve the desired results. A knowledgeable consultant can assist with the proper method of identification and can suggest systems that offer a variety of processing abilities that may not have been previously considered. This too, adds to the overall cost-effectiveness of the system.

The two types of lasers that are frequently used are CO₂ and Nd:YAG. Diode pumped lasers are another alternative and are becoming more available as the prices on the world market continue to decline (the majority of these diode lasers are manufactured overseas). Material and production applications will determine the laser best suited for the job.

Laser systems are typically used for well-defined, fast identification where the quality of the mark matters. High volume processing is ideal for this method. This process has a wide range of applications from personalizing products to 2D and bar code identification programs. The expense of these systems compared to the savings that can be quickly achieved provides cost-effective solutions for all sectors of industry.



Laser Mate self-contained system for turn-key operation.



Laser Mate high-speed closed-loop galvanometers direct the laser beam through an F-Theta lens where it is focused through a multi-glass element into an ultra-fine spot. Resulting lasering speeds are over 200 ips (5 mps).

Some laser systems can mark hundreds of characters per second and the time it takes to fill logos is quite insignificant. There are lasers that can process with some forgiveness in irregular surfaces, but should be tested by the laser company being considered on the material/part you wish to process.

Other laser systems have limits on their material processing abilities and should be identified early in the research stage. Again, the more a system can do, the more cost-effective it is.

Laser Mate Series laser systems offer a variety of processing abilities including a step and repeat table for high volume production. A thorough evaluation helps to determine the proper laser wattage. Customized pallets complete the system, facilitating fast, easy and accurate marking.

The unique Z-axis height adjustment is controlled via a programmable brushless motor, allowing you to quickly set the Z height by entering the thickness of your product and then clicking a button.

Marking Systems to Meet the Application

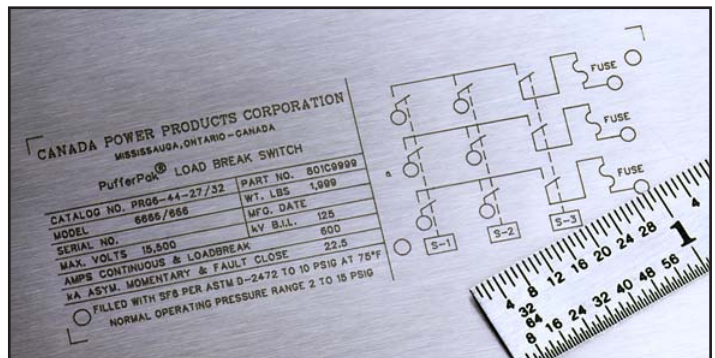
Online Inc. is the only company that designs, manufactures and sells marking systems to meet the individual requirements of each customer, because one size does not fit all.

Careful consideration is taken with each application to determine the proper method of processing, resulting in quality-crafted turnkey systems ready for production. This approach has successfully served many industries for over a decade with unbiased solutions to many unique system requirements.

Equipment options for Online marking systems include rotary marking/indexing attachments for marking around the diameter of cylindrical parts, vacuum fixturing and tooling to facilitate parts handling and alignment and a magazine feeder/stacker to streamline high-volume part marking applications.



Roto-Mite rotary attachments allow marking around the diameter of cylindrical parts. They can also be used as indexers for marking on multi-sided hex or square parts.



Online marking systems can mark diagrams & schematics directly onto parts.

Choosing a marking system and supplier should be based upon the ability to meet requirements with well-designed, well-built systems that not only meet current needs, but can also foresee the needs of the future.

It is critical to make use of high-performance, cost-effective equipment in order to sustain a company in the global marketplace. Today it is the service you can provide that retains clientele and makes a company stand out above the rest.

For details contact the author or **Circle 206**.

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Company Profile...

Online Inc. is a worldwide leading manufacturer of laser, marking and engraving systems. The company started in 1985 when it began producing CAM operated machines with the latest servo programmable technologies. Current products offer speed, versatility and precision. Systems are also available as turnkey production centers.